REMARKS

Claims 1-11 are pending in this application. New claims 10 and 11 have been added and are believed not to present any new matter.

Claims 1, 2, 5, 6 and 9 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Kaede et al. Applicant respectfully traverses this rejection for the following reasons.

In the rejection of claim 1, the Office Action first asserts that Kaede teaches a method that inherently compensates for cross phase modulation. The Applicant respectfully reiterates, however, that Kaede does not explicitly (nor inherently) teach cross phase modulation (XPM). The Office Action asserts that because Kaede teaches a phase modulator applying chirp to a signal putatively allowing the singals to mutually walk-off, low-pass filitering of cross-phase modulation is then inherent. Saunders is cited as allegedly providing corroborating evidence that phase modulation and walk off reduce XPM by dispersion walk off. However, Saunders phase modulates a first signal (e.g., a CW signal) with the interfering (disturbing) signal. Because this first signal is modulated by the interfering signal opposite to the XPM caused by this interfering signal, the XPM is compensated.

Although the walk-off between a first signal and a disturbing signal reduce XPM induced in a fiber, this effect is feature of a fiber and depends on the dispersion. Kaede does nothing expressly or inherently to improve this effect. Furthermore in contrast to Saunders, Kaede prechirps the only data signal (or each data signal in a WDM system separately) with a signal derived from this data signal itself. Thus, it is not possible that XPM is compensated by the system of Kaede because the signals in the WDM system of FIG. 14 causing XPM do not modulate any disturbed channel. In short, this type of prechirp will actually have no influence on XPM. Accordingly, reliance on inherency in the present Office Action is incorrect and the evidence cited in support is, in fact, unsupportive of this assertion.

Additionally, the Office Action asserts that Kaede discloses the claimed features of "generating a control signal from a part of the WDM signal, said control signal controlling the modulator." The Applicant respectfully disagrees. Specifically, Kaede does not illustrate a WDM signal in any of FIGs. 2d, 3d or 4, contrary to the assertions in the Office Action. Rather, these figures illustrate RZ and NRZ intensity modulated signals and system for these signals.

See col. 6, ll. 11-12 and 41-42; and col. 7, ll. 9-19. Thus, the assertion of these figures illustrating the above claimed feature is incorrect.

Additionally, FIG. 4 illustrates only one clock derived from only one data signal by a single clock extraction circuit 306. According to the section cited in the Office Action (i.e., col. 7, ll. 20-56) the circuit 306 extracts a 10 GHz clock signal from the 10 Gb/s electric signal. Because only one data signal is transmitted, coupled with the lack of teaching of WPM, this evinces that no XPM would be present in the system of Kaeda, thus belying the assertion that compensation of XPM is even inherent in this reference.

FIG. 14 of Kaeda does, however, illustrate a dispersion compensation arrangement of a WDM signal. Nonetheless, the reference teaches in connection with this figure that the WDM signal is "divided (demultiplexed) to components . . . the signals of wavelength $\lambda 1$ to $\lambda 4$ are output to first to fourth dispersion pre-equalization circuits . . . [that] are preferably to be similar to them in the first embodiment or the second embodiment." (See e.g., col. 11, ll. 45-52). Thus, the pre-equalization is done according to dispersion of the fiber and with control signal derived from each data signal itself and not from other WDM signals in order that division is done similar to the first embodiment having no WDM signals. Thus, it is clear that import of the teachings of Kaeda is that no control signal is generated from a part of a WDM signal and nor compensation of cross modulation occurs due the explicit or inherent properties of the arrangement taught therein.

With respect to claim 5, the Office Action also asserts that Kaede teaches a measurement coupler that couples out part of a WDM signal. However, as shown in FIG. 14, the reference clearly teaches that dispersion pre-equalization circuits are each separately used for correcting only one signal from among many in the WDM signal, but does not disclose or suggest coupling out a part of the entire WDM signal, which is featured in the claim.

For at least the above reasons, claims 1 and 5 and their dependent claims 2-4 and 6-9 are believed to be allowable over Kaede.

Claims 3, 4 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaede et al. The Applicant respectfully traverses this rejection for the reasons given with respect to claims 1 and 5, from which claims 3, 4 and 7 depend, and because of the additional features recited in these dependent claims.

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaede et al. in view of Becker et al. The Applicant respectfully traverses this rejection for the reasons given with respect to claim 5, from which claim 8 depends, and because of the additional features recited in claim 8.

With respect to newly added claims 10 and 11, these claims are believed to be allowable for at least the reasons presented above as well as due to additional features recited in these claims.

In light of the above, Applicants respectfully submit that claims 1-11 are allowable over the art of record. Accordingly, the Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

BY _____

Patrick B. Law
Reg. No. 41,549
P.O. Box 1135
Chicago, Illinois 60690-1135
Phone: (312) 807-4354

Dated: January 23, 2004